

## CLAIMS

1/ Apparatus adapted to sending transmission packets of predetermined length, the apparatus comprising formatting means suitable for formatting a first type of packet (B1) on the basis of a first training sequence (TS1) and of a first information sequence (IS1), the apparatus being characterized in that in order to send a second information sequence (IS2) longer than the first information sequence (IS1), said formatting means (F) are also designed to format a second type of packet (B2) on the basis of a second training sequence (TS2) that is shorter than the first training sequence (TS1), and of said second information sequence (IS2), said means (F) formatting a packet whose type is identified by an identification signal (ID).

2/ Apparatus according to claim 1, characterized in that it comprises single encoding means (COD) to produce said first and second information sequences (IS1, IS2) respectively from first and second messages (M1, M2).

3/ Apparatus adapted to receiving transmission packets of predetermined length, the apparatus being characterized in that, a received packet being either of a first type (B1) or of a second type (B2) and comprising a respective first or second training sequence (TS1, TS2) together with a respective first or second information sequence (IS1, IS2), the second information sequence (IS2) being longer than the first information sequence (IS1), it comprises means (D, DEM1, DEM2) for isolating the information sequence (IS1, IS2) of said received packet (B) in response to a selection signal (Sel) identifying the type of said packet (B1, B2).

4/ Apparatus according to claim 3, characterized in that the information sequences (IS1, IS2) of the different packets (B1, B2) result from encoding of the same kind,

and the apparatus comprises single decoding means (DEC) for decoding both said first and said second information sequences (IS1, IS2).

5/ Apparatus according to any preceding claim, characterized in that said second information sequence (IS2) contains more information than said first information sequence (IS1).

6/ Apparatus according to any preceding claim, characterized in that said second training sequence (TS2) corresponds to a subsequence of said first training sequence (TS1).

7/ Apparatus according to claim 3 or 4, characterized in that said second training sequence (TS2) corresponds to a subsequence of said first training sequence (TS1), and the apparatus includes single demodulator means (DEM1, DEM2) for demodulating packets of both types (B1, B2).

8/ Apparatus according to any one of claims 1 to 5, characterized in that said second training sequence (TS2) of length 1 is substantially orthogonal to the subsequences of length 1 of said first training sequence (TS1).

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